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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ROBINSON, ELIZABETH A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,255	Applicant(s) KITAHARA ET AL.	
	Examiner Elizabeth Robinson	Art Unit 1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 8-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

It is noted that claim 3 has the status identifier “canceled” and although the text should not be presented for this claim, the Office accepts the amendment, in order to reduce processing time (See MPEP, Section 714 II C (C)).

Claims 1, 2, 5 and 8-16 are currently pending.

Specification

The amendment to the specification is approved.

Claim Rejections - 35 USC § 112

Claims 1, 2, 5, 8, 9, 11, 12, 14 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 contains the limitation that the content of the ultraviolet absorber is 5 to 15 parts by weight based on 100 parts by weight of the ionizing radiation curable resin composition following curing. However, there is no support in the instant specification that the weight ratio is based on the weight after curing. Claims 2, 5, 8, 9, 11, 12, 14 and 15

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depend from claim 1 and thus, also fail to comply with the written description requirement.

Claims 10, 13 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims all depend from canceled claim 3. If the claims were treated as depending from claim 1, from which former claim 3 depended, these claims would duplicate claims 8, 11 and 14. Thus, these claims will not be examined on their merits. However, since the subject matter of these limitations is discussed in the rejections of claims 8, 9, 11, 12, 14 and 15.

Claim Rejections - 35 USC § 103

Claims 1, 2, 5, 8, 9, 11, 12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onozawa et al. (US 6,103,370) in view of Nakamura et al. (US 2002/0085284) and in view of the Ciba[®] TINUVIN[®] 328 or Ciba[®] CHIMASSORB[®] 81 product literature and the Ciba[®] TINUVIN[®] 1130 product literature.

Regarding claim 1, Onozawa (Column 1, lines 43-50) teaches a hard coat sheet comprising a base sheet and a coat layer. The base sheet (Column 2, lines 8-12) can be a plastic film. The film can be a glare preventing film for a computer display (Column 1, lines 6-14). The coat layer can comprise an ultraviolet absorbent (Column 3, lines 44-50). The resin of the coat layer can be cured by electron beam or ultraviolet

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radiation (ionizing radiation) (Column 2, lines 63-66). The coat layer can also comprise a filler, such as silica or acrylic powder, to provide an anti-glare property (Column 3, lines 19-28). The filler is present at 0.5 to 50 parts per 100 parts by weight of the acrylate resin. Since the acrylate resin can be the primary component of the coating (Example 1), the weight percentage limitation for the filler meets the limitation for the microparticles. Since, as shown in the Examples, the solvents, which would be removed during curing, are listed separately from the resin, the weight ratios would be those of the cured composition.

Onozawa does not teach the size or preferred shape of the filler.

Nakamura (Paragraph 9) teaches an anti-glare film for use on an image display device. The binder of the anti-glare layer is formed from the ionizing radiation curable resins (Paragraph 43), including the same types of resins (Paragraph 42) as in Onozawa. The matting agent particles for the anti-glare layer include silica particles and cross-linked acrylic particles (Paragraph 59). The preferred shape of the matting agent is spherical, in order to obtain a consistent anti-glare property (Paragraph 60). The size of the matting particles is from 1 to 5 microns (Paragraph 57), in order to have a sufficient degree of anti-glare behavior, while still maintaining a sharp transmission.

It would be obvious to one of ordinary skill in the art to use the size and shape anti-glare particles of Nakamura, as the anti-glare particles of Onozawa, in order to form an anti-glare layer having a consistent anti-glare property with a sufficient degree of anti-glare behavior, while still maintaining a sharp transmission.

Onozawa (Column 3, lines 44-50) teaches that ultraviolet absorbers can be added to the coat layer and uses one example absorber, TINUVIN[®] 1130 and lower concentrations of absorber in the examples, but does not preclude using a different ultraviolet absorber or different loadings.

As shown in the TINUVIN[®] 1130 product literature, TINUVIN[®] 1130 has a molecular weight of 637.

The TINUVIN[®] 328 product literature shows that TINUVIN[®] 328 has a molecular weight of 351.5. The Ciba[®] CHIMASSORB[®] 81 product literature shows that CHIMASSORB[®] 81 has a molecular weight of 326.4. As shown by the transmittance spectrum of the ultraviolet absorbers, TINUVIN[®] 328 and CHIMASSORB[®] 81 have a lower transmittance in the ultraviolet spectrum than does TINUVIN[®] 1130 for the same loading. Thus, TINUVIN[®] 328 or CHIMASSORB[®] 81 will be a more effective ultraviolet absorber than TINUVIN[®] 1130. The second page of the TINUVIN[®] 328 product literature and the second page of the CHIMASSORB[®] 81 product literature teaches that the amount of TINUVIN[®] 328 or CHIMASSORB[®] 81 required for optimum performance should be determined in trials covering a concentration range. Thus, the amount of absorber would be a results effective variable that would determine the degree of ultraviolet absorption of the coat layer.

It would be obvious to one of ordinary skill in the art to use TINUVIN[®] 328 or CHIMASSORB[®] 81 as the ultraviolet absorber for the sheet of Onozawa, in order to have a more effective ultraviolet absorber than the example absorber and it would be obvious to one of ordinary skill in the art to vary the amount of absorber of Onozawa to

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amounts, including those presently claimed, in order to obtain a desired degree of ultraviolet absorption as is taught by the TINUVIN[®] 328 or CHIMASSORB[®] 81 product literature.

Regarding claim 2, Onozawa (Column 2, lines 35-62) teaches that the resin of the coat layer can also comprise 0.1 to 100 parts by weight of an organopolysiloxane based on 100 parts by weight of the acrylate resin. Since, as shown in the Examples, the solvents which would be removed during curing are listed separately from the resin, the weight ratios would be those of the cured composition.

Regarding claim 5, Onozawa (Column 3, lines 61-62) teaches that the coat layer preferably has a thickness from 1 to 10 microns. Since this thickness includes thicknesses smaller than the particle size, the limitation is met. Further, Nakamura (Paragraphs 48 and 49) teaches that the desired internal scattering of the anti-glare layer can be imparted by having the matting particles size larger than the layer thickness.

Regarding claims 8 and 9, Ciba[®] CHIMASSORB[®] 81 is a benzophenone based ultraviolet absorber.

Regarding claims 11 and 12, as stated above, the microparticles can be silica particles.

Regarding claims 14 and 15, Ciba[®] TINUVIN[®] 328 is a benzotriazole based ultraviolet absorber.

Claims 1, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMan et al. (US 2004/0241469) in view of Onozawa et al. (US 6,103,370) and Nakamura et al. (US 2002/0085284).

McMan (Paragraphs 3-8) teaches a naphthalate polyester overcoated with a protective UV resistant coating comprising more than 10 weight percent benzotriazole UV absorber and a vinyl-functional crosslinkable film former. As shown in Example 63, the weight percentage of benzotriazole is based on the total coating solids and thus, would be those of the cured composition. The ionizing radiation curable resin is the other primary component of the coating. The naphthalate polyester (plastic) can be a multilayer optical film (Paragraph 43). The vinyl-functional crosslinkable film former can be cured by electron beam (Paragraph 31). The UV absorber can be TINUVIN[®] 328 (Paragraph 51) which has a molecular weight of 351.5. The coating composition can also comprise fillers having an average particle diameter of 1 to 10 microns which impart a hazy or diffuse appearance to the cured coating (Paragraph 56). McMan (Paragraph 56) teaches that the amount and type of the filler will be apparent to those skilled in the art.

McMan does not explicitly teach the loading of the microparticles, their material or their shape.

Onozawa teaches that a coat layer can also comprise a filler, such as silica or acrylic powder, to provide an anti-glare property (Column 3, lines 19-28). The filler is present at 0.5 to 50 parts per 100 parts by weight of the acrylate resin.

It would be obvious to one of ordinary skill in the art to use the filler and filler amount of Onozawa, as the filler and filler amount of McMan, in order to have a specific filler that has been shown to be effective as an anti-glare (provides a hazy or diffuse appearance) to a cured optical coating. Since the acrylate resin of McMan (Paragraph 50) can be the primary component of the coating, the weight percentage limitation for the filler meets the limitation for the microparticles.

Nakamura (Paragraph 9) teaches an anti-glare film for use on an image display device. The matting agent particles for the anti-glare layer include silica particles and cross-linked acrylic particles (Paragraph 59). The preferred shape of the matting agent is spherical, in order to obtain a consistent anti-glare property (Paragraph 60).

It would be obvious to one of ordinary skill in the art to use spherical filler particle for the filler particle of McMan, in order to have a consistent anti-glare property for the coated optical film.

Response to Arguments

Applicant's arguments filed April 2, 2010 have been fully considered but they are not persuasive.

Applicant argues that the instant specification provides support that the weight content of the ultraviolet absorber is based on the weight of the ionizing radiation curable resin composition following curing. However, the discussion in the instant specification (Paragraph 27) of the weight content of the ultraviolet absorber does not

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make it clear if the stated values are for the coating composition or the cured anti-ultraviolet layer.

Applicant's arguments regarding the weight percentages of the spherical microparticles and the organopolysiloxane being based on the cured coating are persuasive, since these weight percentages (instant specification Paragraphs 30 and 8, respectively) are based on the anti-ultraviolet layer. Thus, that portion of the 35 U.S.C. 112, first paragraph rejections from the December 9, 2009 Office Action are withdrawn.

Applicant argues that none of the references teach the claimed combination of an ionizing radiation curable resin, spherical microparticles of a particular size, shape and concentration and an ultraviolet absorber having a specific formula weight and concentration. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding the 35 U.S.C. 103(a) rejection over Onozawa et al. (US 6,103,370) in view of Nakamura et al. (US 2002/0085284) and in view of the Ciba® TINUVIN® 328 and 1130 product literature, while Nakamura and the Ciba® TINUVIN® 328 and 1130 product literature do not disclose all the features of the present claimed invention, Nakamura and the Ciba® TINUVIN® 328 and 1130 product literature are used as teaching references, and therefore, it is not necessary for these secondary references to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965,

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179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather these references teach certain concepts, namely the preferred size and shape of the filler to be used in the amount as taught by Onozawa and the effectiveness and loading for an ultraviolet absorber, and in combination with the primary reference, disclose the presently claimed invention.

Regarding the 35 U.S.C. 103(a) rejection over McMan et al. (US 2004/0241469) in view of Onozawa et al. (US 6,103,370) and Nakamura et al. (US 2002/0085284), while Onozawa and Nakamura do not disclose all the features of the present claimed invention, Onozawa and Nakamura are used as teaching references, and therefore, it is not necessary for these secondary references to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather these references teach certain concepts, namely the preferred size, shape, material and loading of the filler, and in combination with the primary reference, disclose the presently claimed invention.

Applicant argues that the Examples of the instant specification show that claimed combination of materials provides unexpected results in reducing the yellow tint of the sheet. As set forth in MPEP 716.02(d), whether unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support". In other words, the showing of unexpected results must be reviewed to see if the results occurred over the entire claimed range, *In re Clemens*,

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622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). Applicants have not provided data to show that the unexpected results do in fact occur over the entire claimed ranges of microparticle diameters and loadings, ultraviolet absorber formula weights and ultraviolet absorber concentrations. Further, It is unclear if the 0.03 to 0.04 difference in b* value of comparative examples 2 and 3 versus Example 3 is a statistically significant difference since the Example values for the instant invention vary by more than this value. The data of comparative Example 1 is for a composition with no particles. Onozawa et al. (US 6,103,370) discloses a coating that comprises particles.

Applicant argues that one skilled in the art would not have been motivated to combine the elements from the cited references in the manner suggested in the Office Action. However, Applicant only provides this as a statement and did not provide a rationale for this argument. Since there were no reasons given refuting the provided motivation statements, the Examiner maintains the rejections of record.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Robinson whose telephone number is (571)272-7129. The examiner can normally be reached on Monday- Friday 8 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. R./
Elizabeth Robinson
Examiner, Art Unit 1787

June 18, 2010

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1787